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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,221	03/25/2006	Akiko Tanaka	A-507	4895
802	7590	03/13/2008		
PATENTTM.US			EXAMINER	
P. O. BOX 82788			CHAPEL, DEREK S	
PORTLAND, OR 97282-0788			ART UNIT	PAPER NUMBER
			2872	
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			03/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/595,221

Applicant(s)

TANAKA ET AL.

Examiner

DEREK S. CHAPEL

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, 2, 5/2/1, 5/1, and 8, drawn to a fabrication method for a computer-generated hologram including:

a step of obtaining a number of two-dimensional image data of a three-dimensional object;

a step of producing three-dimensional image data composed only of surface data of the three-dimensional object from the two-dimensional image data obtained in the above step;

a step of defining the arrangement of the three-dimensional object defined in the above step, a hologram plane, and a reference beam to compute interference fringes on the hologram plane; and

a step of recording the interference fringes computed in the above step onto a recording medium.

Group II, claim(s) 3, 4, 5/4/3, 5/3 and 9, drawn to a fabrication method for a computer-generated hologram including:

a step of obtaining volume data of a three-dimensional object;

a step of producing three-dimensional image data composed only of surface data of the three-dimensional object from the volume data obtained in the above step;

a step of defining the arrangement of the three-dimensional object defined in the above step, a hologram plane, and a reference beam to compute interference fringes on the hologram plane; and

a step of recording the interference fringes computed in the above step onto a recording medium.

Group III, claim(s) 6 and 7, drawn to a computer-generated hologram in which a three-dimensional object having visualized cross-sectional surfaces is recorded, wherein one or more computer-generated holograms, in which a three-dimensional object which is cut along a given cross section and of which cross-sectional surfaces on the cross section are visualized is reconstructably recorded, and a computer-generated hologram, in which the three-dimensional object before cut is reconstructably recorded, are superposed and recorded as a single computer-generated hologram.

Group IV, claim(s) 10, 11, 14/11/10 and 15, drawn to a fabrication method for a computer-generated hologram including:

a step of obtaining a number of two-dimensional image data of a three-dimensional object;

a step of producing three-dimensional image data composed only of surface data of the three-dimensional object from the two-dimensional image data obtained in the above step;

a step of producing a plurality of two-dimensional original images as observed in different observing directions from the three-dimensional object defined in the above step; and

a step of recording element holograms relating to said two-dimensional original images to positions on a hologram plane corresponding to the observing directions, respectively, such that the two-dimensional original images are arranged in one-dimensional direction or in two-dimensional directions.

Group V, claim(s) 12, 13, 14/13/12, 14/12 and 16, drawn to a fabrication method for a computer-generated hologram including:

a step of obtaining volume data of a three-dimensional object;

a step of producing three-dimensional image data composed only of surface data of the three-dimensional object from the volume data obtained in the above step;

a step of producing a plurality of two-dimensional original images as observed in different observing directions from the three-dimensional object defined in the above step; and

a step of recording element holograms relating to said two-dimensional original images to positions on a hologram plane corresponding to the observing directions, respectively, such that the two-dimensional original images are arranged in one-dimensional direction or in two-dimensional directions.

2. The inventions listed as Groups I, II, III, IV, and V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features as shown by the mutually exclusive limitations set forth in the groupings above.

3. A telephone call was made to James Walters (35,731) 503-224-0115 on 2/25/2008 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEREK S. CHAPEL whose telephone number is (571)272-8042. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephon B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. S. C./
Examiner, Art Unit 2872
2/25/2008

/Stephone B. Allen/
Supervisory Patent Examiner, Art Unit 2872